

## CLAIMS

What is claimed is:

- 5        1.            A signal distribution system, comprising:  
         a wideband signal distribution system including  
568 standard wiring;  
         at least one intelligent device that distributes  
modulated RF signals onto said wideband signal distribution  
10        system, wherein the modulated RF signals comprise digital  
information.
2.            A signal distribution system, comprising:  
         a wideband signal distribution system including  
15        568 standard wiring;  
         at least one intelligent device that distributes  
modulated RF signals off of said wideband signal  
distribution system, wherein the signals comprise digital  
information.
- 20        3.            A local RF receiver and baseband out intelligent  
device system for use in transmitting digital information on

an RF carrier through a wideband distribution network,  
comprising:

at least one addressable device having at least  
one input and at least one output;

5 a BUD that receives a signal, which signal  
includes at least a digital signal portion, from the output  
of said at least one addressable device; and

an intelligent device that receives, from the BUD,  
a modulated RF signal carrying at least the digital signal  
portion thereon, wherein said intelligent device splits an  
IP portion from a non-IP signal portion of the digital  
signal portion, wherein said intelligent device removes the  
modulated RF carrier from the IP portion and sends the IP  
portion signal to the input of at least one addressable  
device, and wherein said intelligent device sends the non-IP  
signal portion to at least one standard outlet.

4. The local RF receiver and baseband out intelligent  
device system of claim 3, wherein said intelligent device  
comprises:

a demodulator that receives the modulated RF  
digital signal portion from said BUD;

a first digital combiner that combines at least two demodulated digital signal portions from said demodulator into one high speed digital transmission.

5        5.        The local RF receiver and baseband out intelligent device system of claim 4, wherein said intelligent device further comprises:

an RF splitter connected to the BUD, which RF splitter splits the modulated RF signal; and

10        at least two RF bandpass filters, wherein the first bandpass filter receives the modulated RF signal from said RF splitter and passes the IP signal portion of the modulated RF signal to said demodulator, and wherein the second bandpass filter receives the modulated RF signal from  
15        said RF splitter and passes the non-IP signal portion of the modulated RF signal to the at least one standard outlet.

20        6.        The local RF receiver/baseband out intelligent device system of claim 5, wherein said intelligent device further comprises:

at least one DSP, wherein said DSP controls said demodulator and said at least two RF bandpass filters.

6. The local RF receiver and baseband out intelligent device system of claim 3, wherein each of said at least one addressable devices has an IP address assigned thereto.

5 7. The local RF receiver and baseband out intelligent device system of claim 3, wherein said intelligent device comprises at least one balun.

8. The local RF receiver and baseband out intelligent device system of claim 3, wherein said intelligent device comprises a tone detector with an RF level control circuit that adjusts the modulated RF signal to the standard outlet.

9. The local RF receiver and baseband out intelligent device system of claim 3, wherein the modulated RF signal carrying the IP portion and the non-IP portion is of frequency in the range of about 5 MHz to in excess of 1 GHz.

10. The local RF receiver and baseband out intelligent device system of claim 3, wherein the standard outlet is a television RF outlet.

11. The local RF receiver and baseband out intelligent device system of claim 3, wherein the standard outlet is a computer RF outlet.

5 12. The local RF receiver and baseband out intelligent device system of claim 3, further comprising a first pair and at least one second pair of twisted pair cables, wherein said first pair passes to said addressable device from said intelligent device, and wherein said second pair passes to said intelligent device from said addressable device of the intelligent device system.

13. The local RF receiver and baseband out intelligent device system of claim 12, wherein said second two twisted cable pair is passed within said intelligent device to at least two baluns, which baluns perform impedance matching.

14. The local RF receiver and baseband out intelligent device system of claim 3, wherein the non-IP signal portion is sent to the standard outlet via a tone detector with an RF level control circuit.

15. An intelligent device system for remote sending for use in transmitting digital information on an RF carrier through a wideband distribution network, comprising:

at least one incoming signal generator, wherein an incoming signal generated includes at least a digital signal portion;

a BUD that receives the incoming signal at least one input port, and that includes at least one output port; and

a remote send intelligent device that generates a modulated RF signal carrying the digital signal portion thereon.

16. The intelligent device system for remote sending for use in transmitting digital information on an RF carrier through a wideband distribution network of claim 15, wherein said remote send intelligent device comprises:

a digital combiner that combines at least two incoming signals;

at least one modulator that conditions each incoming signal to a selected frequency; and

at least one RF converter section that places the incoming signal onto an RF carrier.

17. The intelligent device system for remote sending  
for use in transmitting digital information on an RF carrier  
through a wideband signal distribution network of claim 16  
5 wherein said remote send intelligent device further  
comprises:

an RF channel detector that detects the RF  
channels in use; and

10 a DSP that receives the RF channel in use  
information from said RF channel detector, and that receives  
traffic data from said traffic sensor, wherein said DSP uses  
the RF channel in use information to select the RF carrier,  
an RF carrier channel width and an RF guardband width, for  
the incoming signal, and wherein said DSP uses the traffic  
15 data to select at least one of said at least one modulators  
to condition each incoming signal.

18. The intelligent device system for remote sending  
for use in transmitting digital information on an RF carrier  
20 through a wideband distribution network of claim 15, wherein  
the incoming signal entering a first of said at least one  
modulator is measured by at least one traffic sensor.

19. The intelligent device system for remote sending for use in transmitting digital information on an RF carrier through a wideband distribution network of claim 18, comprising at least two modulators, wherein, if an  
5 information volume of the incoming signal is greater than a capacity of the first at least one modulator, according to the traffic sensor, said DSP directs the incoming signal to at least a second of the at least two modulators.

20. The intelligent device system for remote sending for use in transmitting digital information on an RF carrier through a wideband distribution network of claim 19, wherein the traffic sensor is controlled by at least one DSP.

21. An intelligent device system for local sending and receiving for use in transmitting digital information on an RF carrier through a wideband distribution network, comprising:

at least one addressable device having at least  
20 one input and at least one output, wherein at least one of said at least one addressable devices generates an incoming signal, wherein the incoming signal includes at least a digital signal portion;



an intelligent device that generates a modulated  
RF signal carrying the digital signal portion thereon;

a BUD that receives the modulated RF signal;

wherein said intelligent device receives a  
5 modulated RF signal carrying an IP portion and non-IP signal  
portion of the digital signal portion thereon from said BUD,  
wherein said intelligent device splits the IP signal portion  
from the non-IP signal portion, wherein said intelligent  
device removes the RF carrier from the IP signal portion and  
10 sends the digital signal portion to the input of at least  
one of the at least one addressable device, and wherein said  
intelligent device sends the non-IP signal portion to at  
least one standard outlet.

22. The intelligent device system of claim 21, further  
15 comprising:

at least one DSP, wherein said DSP controls the  
demodulation, and the splitting of the modulated RF signal  
by controlling at least two RF bandpass filters, wherein  
20 said DSP receives RF channel in use information from an RF  
channel detector, and receives traffic data, and wherein  
said DSP uses the RF channel in use information to select

the RF modulated carrier, an RF carrier channel width, and an RF guardband width.

23. A local RF receiver and baseband out and wireless intelligent device system for use in transmitting digital and receiving digital and analog information on an RF carrier through a wideband signal distribution network, comprising:

at least one addressable device having at least one input and at least one output;

a BUD that receives a signal, which signal includes at least a digital signal portion, from the output of said at least one addressable device; and

an intelligent device that receives a modulated RF signal carrying an IP portion and a non-IP signal portion of the digital signal portion thereon, wherein said intelligent device splits the IP portion and the non-IP portion, which digital IP signal portion includes at least one wireless portion, and further splits the wireless portion from at least one non-wireless portion, wherein said intelligent device removes the modulated RF carrier from the IP portion and sends the IP signal portion to the input of at least one of the at least one addressable device, and wherein said

intelligent device sends the non-IP signal portion to a standard outlet;

a transcoder for sending the wireless portion from said RF splitter to a wireless port.

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24. The system of claim 23, further comprising:

a wireless demodulator for receiving transmissions from the wireless port, wherein said wireless demodulator is controlled by a DSP and sending those received wireless transmissions to the digital combiner.

25. An intelligent device system for local sending and receiving for use in transmitting digital information on an RF carrier through a wideband distribution network, comprising:

at least one addressable device having at least one input and at least one output, wherein at least one of said at least one addressable devices generates an incoming signal, wherein the incoming signal includes at least a digital signal portion;

an intelligent device that generates a modulated RF signal carrying the digital signal portion thereon;

a BUD that receives the modulated RF signal;

wherein said intelligent device receives a modulated RF signal carrying an IP portion and a non-IP signal portion of the digital signal portion thereon from said BUD, wherein said intelligent device splits the IP signal portion from a non-IP signal portion, which IP portion and non-IP digital signal portion include at least one wireless portion, and wherein said intelligent device splits the wireless portion from at least one non-wireless portion, wherein said intelligent device removes the modulated RF carrier from the IP signal portion and sends the IP signal portion to the input of at least one of the at least one addressable device, and wherein said intelligent device sends the non-IP signal portion to a standard outlet; and

a transcoder for sending the wireless portion to a wireless port.

26. The intelligent device system of claim 25, further comprising a wireless demodulator for receiving transmissions from the wireless port.

27. The intelligent device system of claim 26, further comprising a DSP, wherein said DSP controls said wireless demodulator.

5 28. An intelligent device system for remote sending and wireless sending and wireless receiving of IP and non-IP information on an RF carrier through a wideband signal distribution network, comprising:

at least one incoming signal generator, wherein  
10 said at least one incoming signal generator generates an incoming signal including at least a digital portion;

an intelligent device that generates a modulated  
RF signal carrying the digital portion thereon, said  
intelligent device having a wireless demodulator for  
15 receiving a wireless portion from a wireless port within said wireless device;

a transcoder for sending a wireless portion, which  
wireless portion includes at least a portion of the digital  
portion therein; and

20 a BUD that receives a non-wireless portion of the modulated RF signal;

wherein the wireless portion and the non-wireless portion are split by said intelligent device, and wherein the splitting is controlled by at least one DSP.

5 29. A method for transmitting digital information on an RF carrier through a wideband distribution network, comprising:

providing at least one addressable device having at least one input and at least one output;

10 receiving a signal at a BUD from the output of said at least one addressable device, which signal includes at least an IP signal portion; and

15 receiving from the BUD at an intelligent device, a modulated RF signal carrying the IP signal portion thereon and a non-IP signal portion thereon;

20 splitting and filtering by the intelligent device of the IP signal portion from a non-IP signal portion;

removing, by the intelligent device, of the modulated RF carrier from the IP signal portion;

25 sending, by the intelligent device, of the IP signal portion to the input of at least one of the at least one addressable device; and

sending, by the intelligent device, of the non-IP signal portion to a standard outlet.

30. The method of claim 29, further comprising  
5 sending, by the intelligent device, of a wireless portion of the IP signal portion.

31. A method for transmitting digital information on an RF carrier through a wideband distribution network,  
10 comprising:

providing at least one addressable device having at least one input and at least one output;

generating, by at least one of said at least one addressable devices, of an incoming signal, wherein the  
15 incoming signal includes at least a digital signal portion;

generating a modulated RF signal carrying the digital signal portion thereon;

receiving, at a BUD, the modulated RF signal;

receiving, at an intelligent device, of modulated  
20 RF signal carrying the digital signal portion, which digital signal portion comprises an IP portion and a non-IP signal portion, thereon from the BUD;

splitting and filtering, by the intelligent device, of the IP signal portion from the non-IP signal portion;

removing, by the intelligent device, of the modulated RF carrier from the IP signal portion;

sending, by the intelligent device, of the digital signal portion to the input of at least one of the at least one addressable device; and

sending, by the intelligent device, of the non-IP signal portion to a standard outlet.

32. The method of claim 31, further comprising sending, by the intelligent device, of a wireless portion of the IP signal portion and the non-IP signal portion.

33. A method for transmitting digital information on an RF carrier through a wideband distribution network, comprising:

generating of an incoming signal, wherein the incoming signal includes at least an IP signal portion; and

generating a modulated RF signal carrying the IP signal portion thereon. \_\_



34. A distribution unit for use in a wideband signal distribution system, wherein the wideband signal distribution system distributes signals modulated onto carrier signals of frequency in the range of about 5 MHz to at least about 1 GHz among a plurality of outlets, comprising:

a plurality of input ports that receives at least one incoming signal from at least one outlet, wherein said plurality of input ports are adapted for connection to at least one intelligent device;

a plurality of output ports, wherein said plurality of output ports are adapted for connection to at least one intelligent device;

at least one combiner that combines all incoming signals at said input ports into an additive signal; and

at least one splitter, wherein said splitter splits the additive signal and distributes the additive signal among said plurality of output ports for distribution to the plurality of outlets, and wherein the additive signal distributed to the plurality of outlets comprises at least one baseband signal on the carrier signal of frequency in the range of about 5 MHz to at least about 1 GHz.